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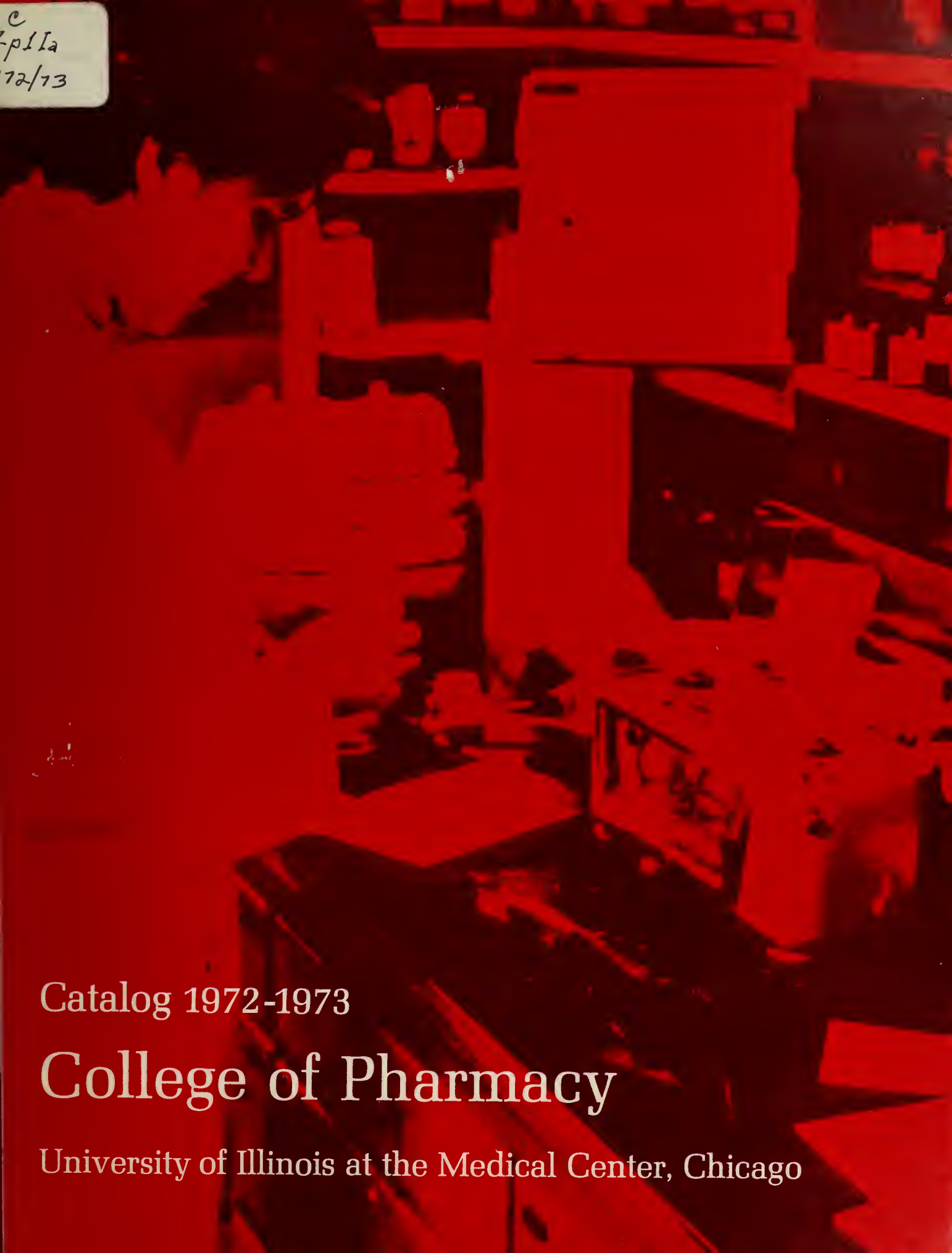

Catalog 1972-1973

# College of Pharmacy

University of Illinois at the Medical Center, Chicago

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COLLEGE OF PHARMACY
UNIVERSITY OF ILLINOIS
at the MEDICAL CENTER
833 South Wood Street
P.O. Box 6998
Chicago, Illinois 60680

# UNIVERSITY OF ILLINOIS
# MEDICAL CENTER CAMPUS
# ACADEMIC CALENDAR 1971 – 1972

| | | |
|---|---|---|
| **1971 Fall Quarter** | (47 days of instruction) | |
| Registration and Orientation | Tuesday–Friday | September 21-24 |
| Instruction Begins | Monday | September 27 |
| Senate Meets | Wednesday | October 6 |
| Veterans Day (classes dismissed) | Monday | October 25 |
| Thanksgiving (classes dismissed) | Thursday–Friday | November 25-26 |
| Senate Meets | Wednesday | December 8 |
| Examination Period | Monday–Friday | December 6-10 |
| Quarter Ends | Saturday | December 11 |
| **1972 Winter Quarter** | (49 days of instruction) | |
| Instruction Begins | Monday | January 3 |
| Senate Meets | Wednesday | February 9 |
| Lincoln Day (classes dismissed) | Friday | February 11 |
| Examination Period | Monday–Friday | March 13-17 |
| Quarter Ends | Saturday | March 18 |
| **1972 Spring Quarter** | (48 days of instruction) | |
| Instruction Begins | Monday | March 27 |
| Good Friday (classes dismissed) | Friday | March 31 |
| Senate Meets | Wednesday | April 5 |
| Memorial Day (classes dismissed) | Monday | May 29 |
| Senate Meets | Wednesday | May 31 |
| Examination Period | Monday–Friday | June 5-9 |
| Commencement | Friday | June 2 |
| Quarter Ends | Saturday | June 10 |
| **1972 Summer Quarter** | (49 days of instruction) | |
| Registration | Monday–Friday | June 12-16 |
| Instruction Begins | Monday | June 19 |
| Independence Day (classes dismissed) | Tuesday | July 4 |
| Examination Period | Monday–Friday | August 28–Sept. 1 |
| Quarter Ends | Saturday | September 2 |
| **1972 Fall Quarter** | (47 days of instruction) | |
| Registration and Orientation | Tuesday–Friday | September 19-22 |
| Instruction Begins | Monday | September 25 |
| Senate Meets | Wednesday | October 4 |
| Veterans Day (classes dismissed) | Monday | October 23 |
| Thanksgiving (classes dismissed) | Thursday–Friday | November 23-24 |
| Senate Meets | Wednesday | December 6 |
| Examination Period | Monday–Friday | December 4-8 |
| Quarter Ends | Saturday | December 9 |
| **1973 Winter Quarter** | (48 days of instruction) | |
| Instruction Begins | Tuesday | January 2 |
| Senate Meets | Wednesday | February 7 |
| Lincoln Day (classes dismissed) | Monday | February 12 |
| Examination Period | Monday–Friday | March 12-16 |
| Quarter Ends | Saturday | March 17 |

**1973 Spring Quarter** (48 days of instruction)

| | | |
|---|---|---|
| Instruction Begins | Monday | March 26 |
| Senate Meets | Wednesday | April 4 |
| Good Friday (classes dismissed) | Friday | April 20 |
| Memorial Day (classes dismissed) | Monday | May 28 |
| Senate Meets | Wednesday | June 6 |
| Examination Period | Monday–Friday | June 4-8 |
| Commencement | Friday | June 1 |
| Quarter Ends | Saturday | June 9 |

**1973 Summer Quarter** (49 days of instruction)

| | | |
|---|---|---|
| Registration | Monday–Friday | June 11-15 |
| Instruction Begins | Monday | June 18 |
| Independence Day (classes dismissed) | Wednesday | July 4 |
| Examination Period | Monday–Friday | August 27-31 |
| Quarter Ends | Saturday | September 1 |

**1973 Fall Quarter** (47 days of instruction)

| | | |
|---|---|---|
| Registration and Orientation | Tuesday–Friday | September 18-21 |
| Instruction Begins | Monday | September 24 |
| Senate Meets | Wednesday | October 3 |
| Veterans Day (classes dismissed) | Monday | October 22 |
| Thanksgiving (classes dismissed) | Thursday–Friday | November 22-23 |
| Senate Meets | Wednesday | December 5 |
| Examination Period | Monday–Friday | December 3-7 |
| Quarter Ends | Saturday | December 8 |

**1974 Winter Quarter** (47 days of instruction)

| | | |
|---|---|---|
| Instruction Begins | Wednesday | January 2 |
| Senate Meets | Wednesday | February 6 |
| Lincoln Day (classes dismissed) | Tuesday | February 12 |
| Examination Period | Monday–Friday | March 11-15 |
| Quarter Ends | Saturday | March 16 |

**1974 Spring Quarter** (48 days of instruction)

| | | |
|---|---|---|
| Instruction Begins | Monday | March 25 |
| Senate Meets | Wednesday | April 3 |
| Good Friday (classes dismissed) | Friday | April 12 |
| Memorial Day (classes dismissed) | Monday | May 27 |
| Senate Meets | Wednesday | June 5 |
| Examination Period | Monday–Friday | June 3-7 |
| Commencement | Friday | May 31 |
| Quarter Ends | Saturday | June 8 |

**1974 Summer Quarter** (49 days of instruction)

| | | |
|---|---|---|
| Registration | Monday–Friday | June 10-14 |
| Instruction Begins | Monday | June 17 |
| Independence Day (classes dismissed) | Thursday | July 4 |
| Examination Period | Monday–Friday | August 26-30 |
| Quarter Ends | Saturday | September 1 |

## HISTORY

The oldest college in the University, the College of Pharmacy, was organized in 1859 as the Chicago College of Pharmacy. The sixth institution of its kind in the United States, it was established eight years before the University itself was incorporated. During the Civil War the school was closed and it was not reopened until 1870. When its property was destroyed by the Great Chicago Fire in 1871, pharmacists the world over furnished books and equipment which enabled the College to begin operations again in the following year. In 1896 it became the School of Pharmacy of the University of Illinois, and in 1932 its name was changed to the College of Pharmacy when the curriculum leading to the degree of Bachelor of Science became effective. In 1939 the College of Pharmacy moved from 715 South Wood Street to quarters in the Dentistry-Medicine-Pharmacy Building at 808 South Wood Street.

Teaching and research facilities of the College were greatly expanded by the occupancy of a new classroom and laboratory building in 1954. The six story Pharmacy Building at 833 South Wood Street, with a new wing added and completed in 1969, provides classrooms, lecture halls, a video equipped auditorium, manufacturing, research, teaching, and dispensing laboratories, and storage space for both teaching and research materials. In the basement there is a snack bar, a lounge area, and locker space for student use. The Pharmacy Building also houses general offices of the University.

The College of Pharmacy offers the last four years of a five year curriculum leading to the degree of Bachelor of Science in Pharmacy. The one year of college work required for the pre-pharmacy curriculum is available at any accredited junior college, college, or university. The College maintains a program of graduate teaching which enables students to earn advanced degrees in chemistry, pharmacy, and pharmacognosy. It has also established refresher courses which enable the University to provide services throughout the state to the 4,200 community pharmacies and the 9,000 pharmacists in Illinois. There is scarcely an area in the health sciences that the College does not touch, or a method of communication that it has overlooked, including radio and television, in order to carry out its educational aims.

## LOCATION

**The University of Illinois at the Medical Center** is about three miles from the Loop, or main business district of Chicago, and can be reached conveniently by elevated train, city bus, or automobile. The Colleges of Dentistry and Medicine and the School of Associated Medical Sciences are centered in the Dentistry-Medicine-Pharmacy complex on Polk, Wood and Wolcott Streets. The College of Nursing is in its own Nursing Building on Damen and Arthington Streets while the Graduate College is located in the Administrative Office Building at 1737 West Polk Street.

**The University of Illinois Hospital,** at 840 South Wood Street, and other affiliated hospitals provide excellent facilities for teaching clinical pharmacy to both undergraduate and graduate students.

**Drug and Horticultural Experiment Station,** at Downers Grove, Illinois, provides a unique opportunity for the development of drug plant research and the training of graduate students majoring in the field of pharmacognosy. The facilities of the Station are augmented by the very extensive plant culture program of the neighboring Morton Arboretum.

## ACCREDITATION

The College of Pharmacy of the University of Illinois is fully accredited by the American Council on Pharmaceutical Education. The Council, which is the only accrediting agency for the profession of pharmacy, is an affiliate of the American Council on Education.

## CAREER OPPORTUNITIES

The curriculum of the College of Pharmacy is designed to prepare the student for the important role of the pharmacist in the community. In his first two years the student is given a broad and thorough knowledge of the basic sciences completed by courses in the social sciences and the humanities. This broad foundation enables the student to select an area of specialization for his final two years in preparation for the stimulating challenges of the future.

The graduates of the College of Pharmacy find a wide variety of professional opportunities open to them. With their knowledge of drugs and patient awareness, developed through the clinical programs of the curriculum, they may practice in a community or hospital pharmacy. Study in specialized areas of the physical and pharmaceutical sciences prepares them for industrial pharmacy, pharmaceutical research, government service, and for other careers related to pharmacy. The administrative sciences encourage those with managerial ability to find opportunities in retail, wholesale, and manufacturing pharmacy. Advanced study on the graduate level provides further opportunity for those who desire careers in teaching and research.

## GENERAL INFORMATION

**Chicago Illini Union.** The Chicago Illini Union is central in the out-of-classroom lives of the students, faculty, staff, alumni and guests of the Medical Center Campus. Located adjacent to the Residence Halls, its facilities include: lounges, with a Music Lounge and Art Lounge; food service facilities, with a Cafeteria, Vending Snack Bar, and the Centennial Room (a buffet dining room); conference rooms, with catering service available; the Chicago Rooms (a large multipurpose room); student activities center; the University Bookstore; and recreational facilities including a Billiard Room, Game Room, and bowling lanes.

The Union Directorate, a student program board, plans both ongoing activities and special events which are designed to enrich the cultural and recreational life at the Medical Center. Its areas of concern include art exhibits, films, speakers, music and theatre events, recreation clubs, one-day outings and longer trips. All students are encouraged to participate either in planning or just enjoying these activities.

**Counseling Center.** A Counseling Center has been established to aid graduate and professional students who encounter personal, psychological, academic or vocational difficulties. These services are available to students and their families without charge.

The Center is staffed by full-time counseling psychologists who have had experience in university counseling centers. In all cases, interviews are kept in the strictest confidence; only on the client's specific request will any information whatsoever about his contact with the Counseling Center be released to anyone. The paramount responsibility of the Center is serving clients; therefore, it serves no regulatory, disciplinary, or security functions.

**Dean's List.** The Dean's List honors those students who have completed a minimum of 36 hours of course work at the College of Pharmacy and have achieved a grade point average of at least 4.0 (B) during the academic year.

**Housing.** Excellent residence hall accommodations are available in a location convenient to all campus functions. The Student Residence Hall provides single and double rooms for 412 men and women. A fully air-conditioned Women's Residence Hall houses an additional 177 students. All rooms are equipped with single beds, study desks and chairs, adequate closet space and related accessory items. Facilities also include central washrooms, automatic elevators, laundry rooms equipped with washers and dryers, a lounge, and a television viewing area. The counseling staff assists students in their personal development and an active student association organizes social programs and events throughout the year. All food service is on a cash basis with a cafeteria in Student Residence Hall and one in the Chicago Illini Union, both open to residents.

The Residence Hall contract includes room only and is payable at the beginning of each quarter or by monthly installments for which there is an additional charge of two dollars. For current rates, application forms, and additional information about housing, write to the Housing Office, University of Illinois at the Medical Center, 818 South Wolcott Street, Chicago, Illinois 60612.

**Library.** The Library's collection is broad in scope and is designed to support the teaching and research needs of its many users. The collection now numbers more than 197,000 volumes and the Library receives approximately 2,200 current journal titles. All students registered at the University may use the Library for study and may borrow books and journals.

**Professional Organization**

*University of Illinois Chapter of the Student American Pharmaceutical Association and Illinois Pharmaceutical Association.* The University of Illinois Chapter of the Student American Pharmaceutical Association and Illinois Pharmaceutical Association is the only organization in the College of Pharmacy which offers the students, both undergraduate and graduate, an opportunity to become members of their professional organizations. Membership in the SAPHA-IPHA consists of a joint membership in the Student American Pharmaceutical Association and the Illinois Pharmaceutical Association plus the monthly publications of both of these professional organizations, the *Journal of the American Pharmaceutical Association* and the *Illinois Pharmacist.* Membership in the SAPHA-IPHA also offers students an opportunity to participate in the professional programs of the student chapter and subsequently at the state and national levels.

**Honorary Organizations**

*Rho Chi.* Phi Chapter of Rho Chi, national honor society in pharmacy, is organized to promote the advancement of the pharmaceutical sciences through the encouragement and recognition of sound scholarship. Students are elected to membership in Rho Chi when they have completed the first quarter of their Junior year. They shall be in the highest twenty percent of their class and have attained a scholastic average of at least 4.0. They shall have shown capacity for achievement in the science and art of pharmacy and the allied sciences as evidenced by strength of character, personality and leadership.

*Phi Kappa Phi.* Phi Kappa Phi, an all university scholastic honor society, elects juniors who have at least a 4.75 grade point average and seniors who have at least a 4.50 grade point average.

**Fraternal Societies.** The College is host to three fraternities and one sorority that are both professional and social. As professional societies they are organized to promote the development of the health sciences and the profession of

pharmacy; as fraternal societies they schedule various social events throughout the school year. Two of the societies are national and two are international, and all have active alumni chapters for continuing achievement in the practice of pharmacy. Eligible men students may pledge Kappa Psi (national) or Phi Delta Chi (national); eligible women students may pledge Lambda Kappa Sigma (international); and eligible men and women students may both pledge Rho Pi Phi (international). An Interfraternity Council coordinates the activities of the fraternal organizations.

**Recreational Activities.** Intramural sports under a trained director are encouraged. Facilities and equipment are available for softball, horseshoes, tennis, archery, wrestling, fencing, badminton, volleyball, basketball, and ping-pong. Swimming and handball are available through special arrangements at the Chicago Circle Campus.

**Student Government.** Each class in the College of Pharmacy is organized with four class officers and two councilmen; it is from these representatives that the Student Council of the College is drawn. Certain members of the Council are also members of the Executive Student Council which represents all students.

The Student Council of the College of Pharmacy is the liaison between the faculty and students. By action of the Dean and the Faculty, membership of selected faculty committees has been expanded to include student members. From names proposed by the Student Council, the Dean appoints three students to the Educational Policy Committee and one member to the Scholarship and Awards Committee. Those who have had their academic careers terminated by the Committee on Student Admissions and Progress may appeal the ruling of that committee. Students also elect members to the Student-Faculty Committee, a further liaison between faculty and students.

**Student Publication**

*The Pharmascope,* edited and managed solely by students, appears once a quarter with items of interest to both students and faculty.

**Summer Session** The College of Pharmacy conducts a summer session for the accommodation of those transfer students who wish advanced standing in order to enroll as second year professional students, or for those who wish to satisfy deficiences in order to be promoted to the next higher class. Those who wish to attend other institutions may do so with the consent of their advisers.

## FEES AND EXPENSES

**Tuition** A schedule of quarterly fees is listed below. Fees are subject to change by action of the Board of Trustees of the University of Illinois.

| | Tuition (except those holding exemptions) | [1]Service Fee | [2]Hospital-Medical-Surgical Insurance Fee | Total |
|---|---|---|---|---|
| RANGE 1 | | | | |
| Full-time schedule of 12 credit hours or above | | | | |
| Resident | $165.00 | $ 54.00 | $ 11.00 | $230.00 |
| Nonresident | 495.00 | 54.00 | 11.00 | 560.00 |
| RANGE 2 | | | | |
| Above 5 but less than 12 credit hours | | | | |
| Resident | $113.00 | $ 38.00 | $ 11.00 | $162.00 |
| Nonresident | 333.00 | 38.00 | 11.00 | 382.00 |
| RANGE 3 | | | | |
| Above 0 and up to and including 5 credit hours | | | | |
| Resident | $ 62.00 | $ 22.00 | $ 11.00 | $ 95.00 |
| Nonresident | 172.00 | 22.00 | 11.00 | 205.00 |
| RANGE 4 | | | | |
| Zero credit only | | | | |
| Resident | $ 31.00 | $ 11.00 | $ 11.00 | $ 53.00 |
| Nonresident | 31.00 | 11.00 | 11.00 | 53.00 |

[1]Persons on the academic, administrative, or permanent nonacademic staff of the University, or on the staffs of allied agencies, and persons registered in absentia or off-campus are exempt from this fee.

[2]Students presenting evidence of equivalent coverage may receive a waiver of the Hospital-Medical-Surgical Insurance Fee upon approval of a petition submitted to the University Insurance Office not later than the final day established for full refund of fees. Persons registered for thesis research in absentia are not assessed this fee. Married students may obtain family coverage by the payment of additional fees but must make arrangements at time of registration.

**Change of Program Fee** A fee of $1.00 is charged for every change slip issued at the request of the student.

**Late Registration Fine** Former students who register after the regular registration days in any quarter pay a late registration fine of $15.00.

**Special Examination Fee** For any special examination given in a course which has been failed, the fee is $10.00.

**Transcript Fee** Any student who has paid all his University fees is entitled to receive, without charge, one transcript of his record. For each additional transcript the fee is $1.00.

## FEES AND EXPENSES

**Unclassified Students** Unclassified students pay fees on the same scale as classified students.

**Visitor's Fee** Persons not holding tuition waivers who register for less than a full program of credit courses (Range II and III) pay $15.00 for each noncredit course. (This is in addition to the required tuition and fees for credit courses). If taken alone, noncredit courses other than thesis research and seminar are assigned to Range IV.

**Service Charge for Deferred Fees** Students may arrange for deferment of fees (installment payments) by calling at the Business Office, 187 Pharmacy Building. A non-refundable service charge of $2.00 a quarter is charged for deferring fees. The service charge, not less than one-third of the current quarter's fees, and all fees and charges from previous terms must be paid on the day of registration. Registration is not completed until fees are paid in full. Failure to meet payments within the time limit cancels the privilege of attending classes.

**Refunds** If a student withdraws during the first ten days of a quarter, his total fees are refunded with the exception of a non-refundable amount of $31.00. If he withdraws after ten days but before one-half of the quarter has elapsed, one-half of his total fees is refunded after the deduction of the above non-refundable amount. No refund is made if the student withdraws after one-half of the quarter has elapsed.

**Living Expenses** Students who live outside the Residence Halls may estimate their expenses from $150.00 to $200.00 a month exclusive of books, clothing, transportation, and miscellaneous needs.

**Books and Supplies** The initial expense for books and materials for the first year averages approximately $100.00. Some of the books purchased the first year are used throughout the four years, thereby reducing the expenses for upper classmen.

## FINANCIAL AIDS

**Scholarships**

*County Scholarships.* Two County Scholarships are awarded to the highest ranking candidates in each county. These awards, which are tuition waivers for four years, may be used in any course in the six state supported universities in Illinois. The candidate must be a resident of Illinois and the county where application is made. The scholarship is given only to graduating high school seniors; anyone who has had college work after high school is not eligible.

*Special County Scholarships.* Additional scholarships are awarded in counties with populations over 100,000. These

awards, which are tuition waivers for four years, may be used in any course at the University of Illinois. The candidate must be a resident of Illinois and of the county where application is made. The scholarship is given only to graduating high school seniors; any one who has had any college work after high school is not eligible.

*Military Scholarships.* A four year tuition scholarship is available to each veteran who served in World War I if he entered the service between April 6, 1917 and November 11, 1918, and for each veteran who served in the Armed Forces at any time after September 16, 1940. The scholarships may be used in any course at any of the state supported universities or junior colleges in Illinois. Veterans must be honorably discharged, or separated, and have satisfied the residence requirements of the State of Illinois.

*Veterans' Children's Scholarships.* One scholarship is awarded in each county to a child or descendent of a veteran of World War I, or to a child of a veteran of World War II, and one to a child of a veteran who served at any time during the national emergency between June 25, 1950 and January 31, 1955. Preference is given to candidates whose fathers are deceased or disabled. Candidates must submit evidence of their eligibility and whether or not the parent is deceased or disabled. The award, a tuition waiver for four years, may be used in any course in the University of Illinois. There is no special average required nor does previous college work bar any candidate from receiving the scholarship. Candidates must be residents of Illinois and of the county where application is made.

*General Assembly Scholarships.* Each member of the Illinois General Assembly may nominate each year one student from his district for a four year scholarship. Original nominations must be made before the beginning of the school semester. The law also provides for appointments to fill vacancies of unused portions of the scholarships. The award consists of a four year tuition waiver unless the award is for the unused portion of a scholarship for less than four years. It may be used in any course in the University of Illinois. Nominee must be a resident of Illinois and the district from which he is nominated.

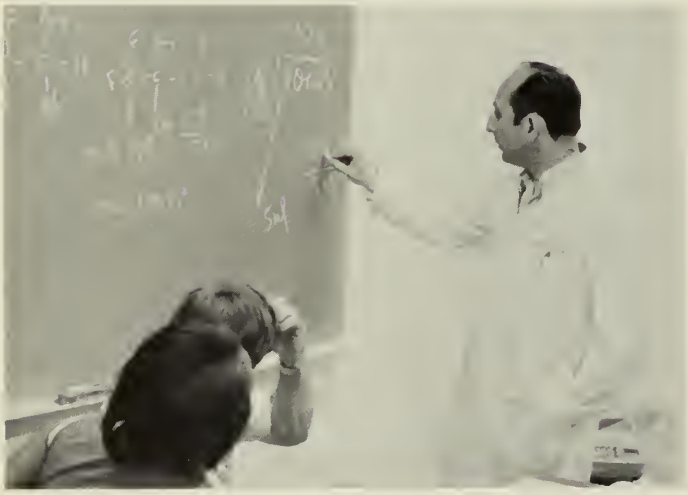
*Health Professions Scholarship Program.* This program was designed to enable talented students from low income families to undertake the course of study required to become physicians, dentists, osteopaths, optometrists, pharmacists, or podiatrists. The first consideration is need.

The maximum amount a student may receive each year is $2,500. In determining the amount of the scholarship, the school will consider the total expenses needed to pursue the chosen course of study and the financial resources available for meeting these expenses. Application forms are available at the Office of Student Affairs.

*Illinois State Grant Program.* This program offers tuition and fee waivers to college students who are residents of Illinois on

a non-competitive basis. Applications are available at the Office of Student Affairs and must be submitted to the Commission office.

*Scholarships Awarded by the Illinois State Scholarship Commission.* By authorization of the state legislature, funds are provided for scholarships which may be used in any approved college or university in Illinois. High school seniors who rank in the top fifty percent of their graduating classes may write the State Scholarship examination. Scholarships are awarded on the basis of academic achievement and financial need. Cash awards are limited to tuition and fees and may not exceed $1,250 a year. These are annual awards but are renewed for three additional years if the holder maintains a satisfactory record and shows financial need. These awards are administered by the Illinois State Scholarship Commission. Application for these scholarships are available through high school principals.



**Grants-In-Aid**

*Grants-In-Aid Awarded by the College of Pharmacy Committee on Awards and Scholarships.* This committee has at its disposal a number of grants-in-aid which may be awarded on the basis of need. Application should be addressed to the Dean of the College of Pharmacy.

*Grants-In-Aid Awarded by Pharmaceutical Organizations.* The following organizations have given funds for grants-in-aid which are awarded primarily upon the scholastic ability and the need of the student:

Alumni Association, University of Illinois College of Pharmacy
American Foundation for Pharmaceutical Education
Charles P. Bondy Memorial Fund for Pharmacy
John W. Dargavel Foundation
Douglas Pharmaceutical Council
Myron Goldsmith Memorial Fund
Reed G. Henninger Scholarship
Ladies' Auxiliary of the Chicago Retail Druggists Association–Women's Organization of the National Association of Retail Druggists, Chapter Number Two
Al R. Langerman Memorial Fund
Maurice Skelton Memorial Fund
Women's Auxiliary of the Chicago Colleges

**Loan Funds**

Loan funds have been established for pharmacy students in the University who are in need of aid to finish their courses or who need an emergency loan. Information about these loans may be obtained from the Dean's office or the Office of Student Affairs.

*Ebert Loan Fund.* In 1907, after the death of Mr. Albert E. Ebert, who had taken an active part in the development of the College of Pharmacy, the Alumni Association of the College established a fund in memory of Mr. Ebert. Later contributions were made by the Women's Organization of the Chicago Retail Druggist Association to establish a loan fund. In 1931 the funds were combined into one known as the Albert E. Ebert Loan Fund. The Class of 1932 also contributed to this fund. Loans are made available to deserving students.

*Goldenrod Ice Cream Company Loan Fund.* Established in 1943, through a gift from the Goldenrod Ice Cream Company of Chicago, this fund provides for loans to students.

*Goldstine Emergency Loan Fund.* This fund for emergency loans to students was established by the Board of Trustees in 1933. The name was changed in 1943 when the fund was increased by a gift from Mr. Harry Goldstine.

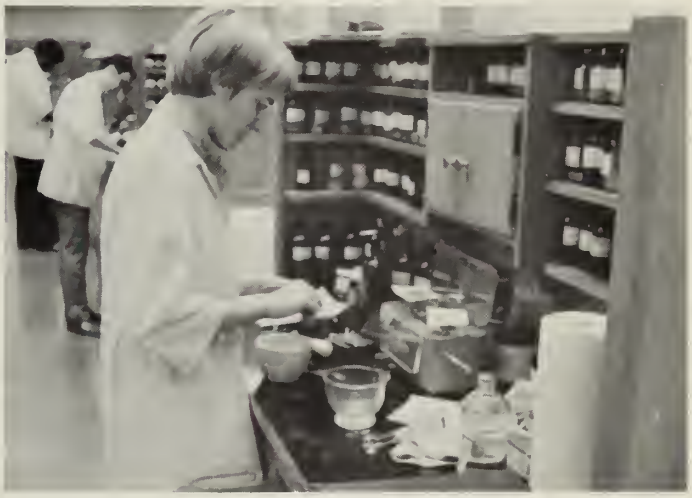
*Health Professions Student Loan Program.* This special federal loan program is available to all pharmacy students. The primary qualification for a loan is need, and parents are required to submit a financial statement. Qualified students may borrow up to a maximum of $2,500 a year. Interest begins one year after graduation, with 10 years permitted for repayment. Interest is computed at the federal rate at the time the loan is made. Currently the interest rate is 3 per cent.

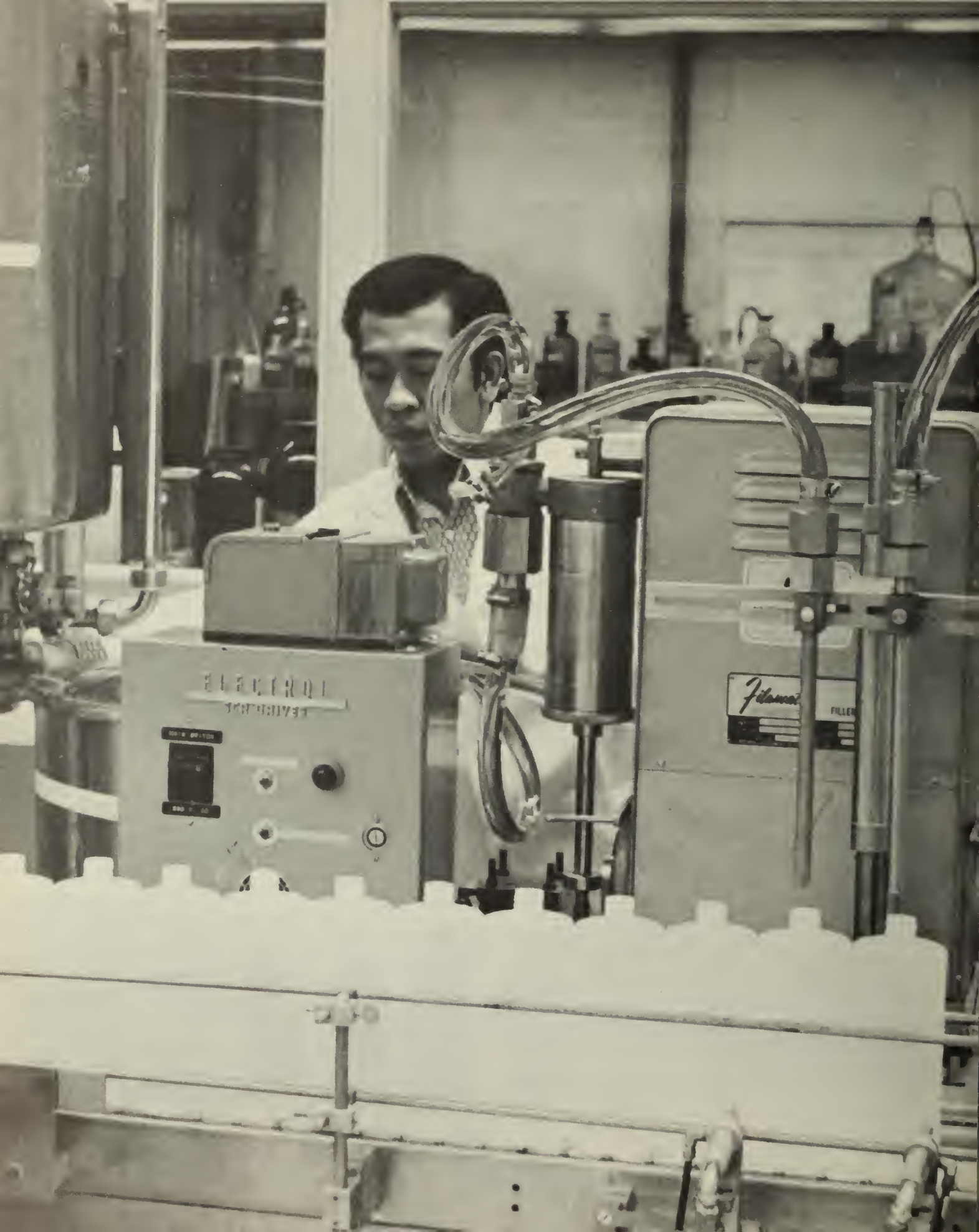
*Illinois Guaranteed Loans.* The Guaranteed Loan Program is designed to assist students from middle and upper income groups. Under this program a student may borrow from a bank or other financial institution. If his family has an adjusted income of less than $15,000 a year, he pays no interest on his loan while he is in school. Repayment of principal and interest at the rate of 7 percent begins when the student has ceased his course of study. A student from a family with an adjusted income of $15,000 or more pays 7 percent interest on the loan semi-annually while he is in school. Repayment on the principal begins 9 months after he ceases his education. A student may borrow up to $1,500 annually.

*Student Council Emergency Loan Fund.* A sum of money available for emergency loans to students in need of financial aid is on deposit with the Chicago Organizational Fund.

*Sidney A. Roth Memorial Fund.* The Alumni Chapter of the Delta Kappa Sigma Chapter of Rho Pi Phi fraternity has made available an amount equivalent to the tuition and fees for one quarter to students needing financial assistance. This loan is made upon the recommendation of the Dean of the College of Pharmacy.

*George L. Webster Loan Fund.* This Fund, established in honor of Dr. George L. Webster, Dean of the College of Pharmacy, Emeritus, by alumni, colleagues, and friends, is for short term and emergency loans. This loan is made upon recommendation of the Dean of the College of Pharmacy. The Fund is administered by the University of Illinois Foundation.





## HONORS

**Graduation with Honors.** A student who satisfies the requirements for graduation, and who attains in all work presented for the degree the average grade specified may be recommended by the University Senate for the honors stated: for an average grade of not less than 4.35, graduation with honors; for an average grade of not less than 4.75, graduation with high honors. The honors awarded are noted on the diploma and in the Commencement program.

**Honors Day Convocation.** An Honors Day Convocation is held annually. Certificates indicating attainment of honors are awarded to members of all four classes who have maintained an average grade of not less than 4.35; and certificates indicating attainment of high honors are awarded to members of all four classes who have maintained an average grade of not less than 4.75. These averages are determined at the beginning of the third quarter of each year. In addition, the prizes indicated in the following section are awarded at this convocation.

## PRIZES

**Bristol Laboratories Award.** This award is an unabridged medical dictionary presented to an outstanding member of the senior class.

**Chicago Retail Druggists Association–Women's Organization of the National Association of Retail Druggists, Chapter Two.** This monetary award is given annually to the freshman student who has the highest scholastic average upon entering the third quarter of the freshman year.

**Cutler and Nechamkin Prizes in Accounting and Retail Pharmacy Management.** Mr. Bernard N. Cutler and Mr. Gerald Nechamkin, Certified Public Accountants, offer annually two United States Government Bonds to the students who have achieved the highest grades in the courses in retail pharmacy management and in principles of accounting.

**Paul Eiche Prize.** This award is a gold medal bearing the inscription, "Paul Eiche Award," in memory of the donor, Mr. Paul Eiche. It is presented annually to the member of the graduating class who has attained the highest general scholastic average upon entering the third quarter of the senior year.

**Elich Prize in Pharmacognosy.** In memory of Mr. Herman Elich of the Class of 1896, a monetary prize is awarded annually to the senior student with the highest scholastic average in pharmacognosy.

**Herbert Martin Emig Award in Clinical Pharmacy.** This award was established by the Class of 1966 in honor of Professor Herbert Martin Emig in appreciation of his forty years of effective teaching of the techniques and professional philosophy of clinical pharmacy. A plaque is presented to the student who has excelled in all areas of the clinical pharmacy course.

**Kermit L. Friedman Award in Pharmacy Administration.** In memory of Mr. Kermit L. Friedman a monetary award is given annually to the graduating senior who has shown distinction in scholarship in Pharmacy Administration courses.

**Ralph M. Henninger Award in Pharmacy.** In memory of Mr. Ralph M. Henninger, a plaque is given annually to the graduating senior who has achieved the highest scholastic standing in the courses in pharmacy upon entering the third quarter of the senior year.

**Illinois Pharmaceutical Association Women's Auxiliary Prize.** A monetary award is presented annually to the senior student who has done the most to promote the profession of pharmacy.

**Illinois Pharmaceutical Association Women's Auxiliary Scholarship Award.** A monetary award is given annually to the junior woman student who has achieved a minimum grade point average of 4.0 and has been active in professional and student organizations.

**Illinois Pharmaceutical Travelers Association Prize in Pharmacy.** The Illinois Pharmaceutical Travelers Association sponsors an annual monetary award to a graduating male student who has maintained a grade point average of 4.0 or better in pharmacy upon entering the third quarter of the senior year. The basis for selecting the recipient is character, leadership, and scholastic achievement.

**Johnson and Johnson Award in Pharmacy Administration.** The Johnson and Johnson Company sponsors an annual award consisting of a mortar and pestle presented to the member of the graduating class who has obtained excellence in courses in pharmacy administration.

**Lilly Achievement Award.** Eli Lilly and Company sponsors an award of a gold medal presented to a graduating senior for superior scholastic achievement, leadership, and professional attitude.

**Merck Award.** Merck and Company makes available to outstanding members of the graduating class copies of the Merck Index and the Merck Manual.

**Rexall Award.** The Rexall Drug Company sponsors an award of a mortar and pestle presented to an outstanding member of the Junior Class.

**Rho Chi Prize.** The Phi Chapter of Rho Chi, honorary pharmaceutical society, awards annually an embossed copy of the United State Dispensatory as a prize to the sophomore student who has attained the highest scholastic average upon entering the third quarter of the sophomore year.

**Van Schaack Prize in Chemistry.** A gold medal, known as the C. P. Van Schaack Award, is presented to the senior student who has the highest scholastic average in chemistry upon entering the third quarter of the senior year.

**Charles R. Walgreen, Jr. Scholarship Award.** A monetary award is given annually to the Junior student who has the highest scholastic average upon entering the third quarter of the junior year.

## ADMISSION REQUIREMENTS

The curriculum in pharmacy consists of five academic years of college work leading to the degree of Bachelor of Science in Pharmacy. This is a minimum curriculum adopted by all but two accredited colleges of pharmacy in the United States. The two exceptions now require six years of collegiate work leading to a degree of Doctor of Pharmacy.

A person seeking admission to the College of Pharmacy must have been graduated from an accredited secondary school, or have equivalent preparation, and have satisfactorily completed not less than thirty semester hours or equivalent of academic work exclusive of hygiene, physical education, and military training in an accredited college, junior college, or university.

The applicant for admission should forward to the Director of Admissions and Records, 1737 West Polk Street, P. O. Box 6998, Chicago, Illinois 60612 the following documents: (1) completed application forms, including a non-refundable $15.00 application fee, and (2) an official transcript for each junior college, college, or university attended.

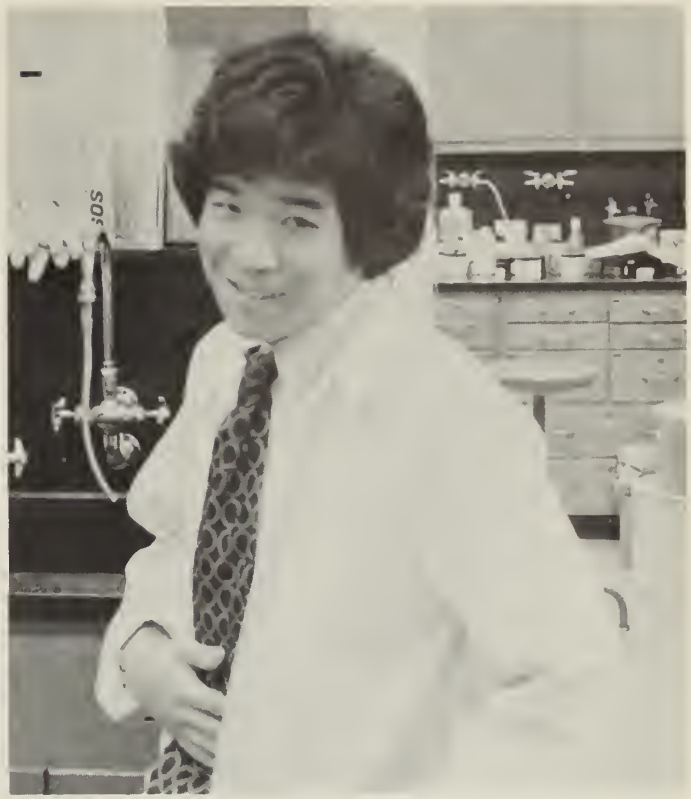
New classes enroll only once a year and begin in late September. Applications must be completed before September 1 of the year of enrollment. Only in exceptional circumstances are applications accepted after that date.

**Non-Residents**
Up to ten percent of the entering class may be non-residents of Illinois who have high scholastic standing. Applicants from foreign countries must make all arrangements in advance. They must have complete credentials and certify that they are able to finance themselves in full while attending the University. Certificates in a foreign language must be accompanied by a certified translation.

**Selection of Applicants**
Applicants must have a college average of at least 3.25 in terms of the grading system of the University of Illinois for all work previously taken. Students from another college in the University who are eligible for admission but whose average is between 3.25 and 3.00 may be admitted on probation. The grading system at the University of Illinois is based on A = 5.0, B = 4.0, C = 3.0, D = 2.0, and E = 1.0 (failure).

**Readmission requirements**
A student who returns to school after being out one or more quarters is considered for readmission on the basis of the curriculum in effect at his return. In no case is he penalized for conditions beyond his control. A student dropped for poor scholarship may be readmitted by the Committee on Student Admission and Progress but must prove he can do work on a level required for graduation.

**Renewing Applications**
An applicant who has been accepted for admission but fails to enroll, and who wishes to enter in a subsequent year must reapply for admission and must meet all requirements in force at the time of his re-application.



**High School Requirements**

Certain high school courses are required to meet the fifteen units of acceptable work in preparation for the pre-pharmacy curriculum in college. Three years of English, one year of algebra, and one year of plane geometry are among the requirements. The College of Liberal Arts and Sciences of the University of Illinois requires, in addition to those courses mentioned, two years of Latin or a modern foreign language for admission to the pre-pharmacy curriculum. A fourth year of English and additional mathematics are preferred but not required. Courses such as biology, chemistry, and physics serve as a foundation for future courses in the College of Pharmacy. History and sociology are also of great value, and skill in the use of a typewriter is an asset to anyone who plans to attend college.

**Pre-Pharmacy Requirements**

College work submitted to meet entrance requirements must include a minimum of credit in the following courses:

| | Semester Hours |
|---|---|
| General or inorganic chemistry | 8 |
| College Algebra | 3 |
| Plane trigonometry | 2 |
| English composition | 5 |
| General biology | 8 |
| Total | 26 |

The elective courses chosen to complete the required thirty semester hours should not include courses offered in the College of Pharmacy but those which will increase the social and cultural background of the student. If credit in courses required in the College of Pharmacy is offered to meet minimum admission requirements, the student must elect an equivalent number of hours to meet graduation requirements.

**Advanced Standing**

A student may apply for admission and receive advanced standing in the professional curriculum for any or all of the following courses. If all are completed, enrollment for a summer session in the College of Pharmacy in Pharmacy 110, Pharmacy 113, and Pharmacy 121 will satisfy the requirements of the first professional year:

| | Semester Hours |
|---|---|
| Organic Chemistry | 10 |
| Physics | 8 |
| Calculus | 3 |
| Introductory Anatomy | 3 |
| Electives which may include more than the minimum of the above or other courses in the Humanities or Social Sciences | 4 |
| Total | 28 |

**Admission by Transfer**

Any one who wishes to transfer his credits from another accredited school or college of pharmacy must present an official transcript which shows him to be in good standing at the time of his withdrawal from the last school or college attended. Only grades of "C" (3.0) or better are considered for advanced standing. The degree of Bachelor of Science in

Pharmacy is never granted to a student who has not been in residence in a school or college of pharmacy for at least three academic years.

**Deposit**

Each applicant who is assigned a place in any class is required to make a deposit of $30.00 within two weeks of the date of notification that he will be admitted. This deposit is applied on fees assessed against him at the time of registration. Failure to pay this deposit within the specified time subjects the applicant to forfeiture of his place. The deposit is not refundable.

**Physical Requirements**

Evidence of satisfactory health is desirable before enrollment, and a certificate attesting to the applicant's health is requested from the Health Service of the last institution attended or from the applicant's private physician. Each applicant is advised to see a physician about his health, the possible need for glasses or correction of other defects, and to insure that immunization for smallpox, tetanus, and poliomyelitis are up to date.

Each student accepted for admission is required to report to the University Health Service for a medical examination, laboratory tests, and immunization.

Appointments for the physical examination by the Health Service can be made by telephoning 663-7420 or by appearing in person at Room 130, University of Illinois Hospital, 840 South Wood Street, Chicago 60612. These appointments should be made as soon as possible after the letter of acceptance is received. Enrollment in the College of Pharmacy is not continued without approval from the Health Service.

## ACADEMIC STANDARDS

**Graduation Requirements**

In order to qualify for graduation a student must be of good moral character, obtain passing grades in all courses of the required curriculum, pay all indebtedness to the University, and have completed successfully a minimum of 189 quarter hours of the professional curriculum and earned a minimum of 567 grade points. A minimum grade point average of "C" (3.0), including work taken at other institutions and accepted for advanced credit, is required for graduation. An average of "C" (3.0) must be attained in work done at the College of Pharmacy, University of Illinois. Failures of required courses in the curriculum must be removed by successfully repeating the courses that were failed. When a course is repeated, both the original and the subsequent grade are included in the average.

To earn the degree of Bachelor of Science in Pharmacy the student must have completed a total of at least three years residence in a school or college of pharmacy. To receive this degree from the College of Pharmacy, University of Illinois, a student must have completed substantially all the work of the senior year and have been in residence at least one academic year.

**Grading System and Grade Point Averages**

Grades and symbols and grade point averages given for work in the College of Pharmacy are as follows:

| Grades | Equivalent | Grade Points per Hour |
|---|---|---|
| A | Excellent | 5 |
| B | Good | 4 |
| C | Average | 3 |
| D | Poor but passing | 2 |
| E | Failure | 1 |
| Ab | Failure because of absence from final examination without excuse | 1 |

Symbols not used in determining grade point average

"W" Withdrawn from course without penalty

"Inc" Incomplete grade with an approved extension of time to complete final examination or incomplete course work. An incomplete must be removed by the end of the student's second quarter in residence following that in which the incomplete was incurred, or, if the student is not in residence, by the end of one year.

Determining the grade point average. This is used for applying probation and drop rules. Multiply the number of hours for each grade by the weight, add the results, and divide by the total number of hours. For example:

| Grade | Hours | Weight | Grade Points |
|---|---|---|---|
| A | 3 | 5 | 15 |
| B | 5 | 4 | 20 |
| C | 4 | 3 | 12 |
| | 12 | | 47 |

The grade point average is 47 divided by 12 or 3.916.

**Probationary Status**

A student who fails to attain an overall grade point average of "C" (3.0) at the end of any quarter is placed on probation. Probation is removed at the end of any quarter in which the grade point average of that quarter and the cumulative grade point average equals or exceeds "C" (3.0). A student on probation may not be initiated into a fraternity or sorority or elected to office in a student organization. He may also be required to limit the number of hours of course work during probation. Any student who consistently earns grades under "C" (3.0) may be denied promotion to the next higher class.

**Refusal of Further Registration for Poor Scholarship**

(1) A student who fails to remove probationary status during the next quarter may be dropped for poor scholarship. (2) A student who is thirty or more hours below a "C" (3.0) in any quarter is automatically dropped for poor scholarship. (3) A student who receives either unsatisfactory or failing grades in a substantial portion of course work for which he receives a grade at the end of the quarter may be dropped for poor scholarship. (4) A student who receives failing grades in one

half or more of course work for which he receives a grade at the end of the quarter is automatically dropped for poor scholarship.

**Readmission by Petition**
A student who is refused further registration because of poor scholarship may petition the Committee on Student Admission and Progress for readmission. Reconsideration of a student dropped for poor scholarship is not a guarantee of readmission. Except in unusual circumstances a student may be reinstated only once.

**Promotion to the Next Higher Class**
At the end of the academic year a student who has completed substantially all of his course work for that year and has a grade point average of "C" (3.0) or better is promoted to the next higher class. A student who has a grade point average of less than "C" (3.0) at the end of the academic year may be promoted to the next higher class only with the approval of the Committee on Student Admission and Progress. If a student's cumulative grade point average is substantially below "C" (3.0), he may not be promoted to the next higher class.

**State Registration of Pharmacists**
The Illinois Pharmacy Practice Act provides that a candidate for registration as a registered pharmacist must be a citizen of the United States; must have attained the age of twenty-one years or over; must be of good moral character and temperate habits; must be a graduate from a department, school, or college of pharmacy recognized and approved by the State Department of Registration and Education; must have had at least one year of pharmacy apprenticeship experience from and after the successful completion of at least one academic year of attendance in a department, school, or college of pharmacy; and must pass a satisfactory examination prescribed by the State Board of Pharmacy.

## CURRICULUM PATTERN

During the four year course of study the student completes a core curriculum of basic subjects in his first two years followed by a concentrated study in an area of specialization in his final two years. In addition, he selects courses in the social sciences and the humanities to satisfy the general education requirements of the University. Electives then complete the course of study.

| Total Number of Hours in the Five Year Curriculum | Hours |
|---|---|
| Pre-Pharmacy transferred credit | 45 |
| Core Curriculum (including the Social Science Sequence) | 133 |
| Each Area of Specialization (including required courses and professional electives) | 32 |
| General and professional electives | 24 |
| Total number of hours required for graduation | 234 |

## SUMMARY OF CURRICULUM

### I. Core Curriculum

#### First Professional Year

| | 1st Qtr. | | | 2nd Qtr. | | | 3rd Qtr. | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | D | L | Cr | D | L | Cr | D | L | Cr | Cr |
| Chemistry 111, 112, 113 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 15 |
| Physics 111, 112, 113 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 12 |
| Mathematics 111 | 4 | - | 4 | - | - | - | - | - | - | 4 |
| Pharmacy Calculations 113 | 1 | - | 1 | - | - | - | - | - | - | 1 |
| Pharmacology 122 (Introductory Anatomy) | - | - | - | - | - | - | 3 | 4 | 4 | 4 |
| Pharmacy 110, 121 | 1 | - | 0 | 3 | 3 | 4 | - | - | - | 4 |
| | 13 | 7 | 14 | 10 | 10 | 13 | 10 | 11 | 13 | 40 |
| Electives[a] | | | | 3-4 | | | 3-4 | | | 46-48[b] |

#### Second Professional Year

| | 1st Qtr. | | | 2nd Qtr. | | | 3rd Qtr. | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | D | L | Cr | D | L | Cr | D | L | Cr | Cr |
| Chemistry 121, 122 | 3 | 3 | 4 | - | - | - | 3 | 8 | 5 | 9 |
| Chemistry 123 | 4 | 4 | 5 | - | - | - | - | - | - | 5 |
| Pharmacy 122, 123 | - | - | - | 3 | 3 | 4 | 3 | 3 | 4 | 8 |
| Physiology 231, 232 | 4 | - | 4 | 4 | - | 4 | - | - | - | 8 |
| Microbiology 233 | 3 | 4 | 4 | - | - | - | - | - | - | 4 |
| Pharmacognosy 232, 233 | - | - | - | 3 | 4 | 4 | 3 | 4 | 4 | 8 |
| | 14 | 11 | 17 | 10 | 7 | 12 | 9 | 15 | 13 | 42 |
| Electives[a] | | | | 3-4 | | | 3-4 | | | 48-50 |

#### Third Professional Year

| | 1st Qtr. | | | 2nd Qtr. | | | 3rd Qtr. | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | D | L | Cr | D | L | Cr | D | L | Cr | Cr |
| Pharmacology 241, 242, 243 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 12 |
| Pharmacy 231, 237 | 3 | 3 | 4 | - | - | - | 3 | 4 | 4 | 8 |
| Chemistry 342 | - | - | - | 4 | - | 4 | - | - | - | 4 |
| | 6 | 7 | 8 | 7 | 4 | 8 | 6 | 8 | 8 | 24 |
| Electives | | 8-9 | | | 8-9 | | | 8-9 | | 48-51 |

#### Fourth Professional Year

| | 1st Qtr. | | | 2nd Qtr. | | | 3rd Qtr. | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | D | L | Cr | D | L | Cr | D | L | Cr | Cr |
| Pharmacy 241, 242, 243 | 3 | 4 | 4 | 3 | 8 | 5 | 3 | 4 | 4 | 13 |
| Pharmacy Administration 243 | 4 | - | 4 | - | - | - | - | - | - | 4 |
| | 7 | 4 | 8 | 3 | 8 | 5 | 3 | 4 | 4 | 17 |
| Electives | | 8-9 | | | 11-12 | | | 11-12 | | 47-50 |

a A student must elect the social science sequence (Pharmacy Administration 113, 4 hours; Psychology 126, 3 hours; and Sociology 125, 3 hours), during the first two years in the College of Pharmacy if he did not transfer the equivalent of these courses. Those students who elect Mathematics 115 and 116 (the elective calculus sequence) may postpone taking the social science electives until their third year in the College of Pharmacy.

b The University requirement for Physical Education is deferred for students entering the College of Pharmacy until adequate facilities become available on campus or until alternate arrangements can be made. The faculty encourages students to take physical education courses on an elective basis.

**II. Areas of Specialization**

During the Winter Quarter of the second professional year, the student is required to attend a series of class meetings on a non-credit basis to acquaint him with all of the programs of specializations offered in the College and their potential to him as a graduate pharmacist. Besides his class adviser, the student is expected to pick an academic adviser from the faculty before the end of his second year who will discuss specialization further with him and guide him in selecting suitable professional electives to complete the 32 hours in his specialization. With the exception of some English courses, nearly all of the electives listed in the catalog qualify as professional electives. Course work transferred from other institutions is considered in granting credit for courses in the area of specialization or as professional electives.

**1. Pharmacy Practice**

| Courses | Credit |
|---|---|
| Pharmacy Administration 330–Behavioral Sciences in Pharmacy | 3 |
| Pharmacology 123–Introductory Histology | 3 |
| Introductory Pathology | 2 |
| Principles of Drug Therapy | 2 |
| Statistical Methods and Experimental Design | 4 |
| Drug Information and Literature Evaluation | 3 |
| Pharmacy 250–Pharmacy Clinics | 3 |
| Preventive Medicine and Community Health | 3 |
| Professional Electives | 9 |

## 2. Pharmacy Technology

| Courses | Credit |
|---|---|
| Pharmacy 305--Physical Pharmacy | 3 |
| Chemistry 231--Drug Assaying | 4 |
| Pharmacy 255--Manufacturing Pharmacy | 3 |
| Pharmacy 260--Introduction to Industrial Pharmacy | 4 |
| Pharmacy 265--Sterile Product Technology | 3 |
| Pharmacy 275--Advanced Formulations | 3 |
| Professional Electives | 12 |

## 3. Administrative Science

| Courses | Credit |
|---|---|
| Pharmacy Administration 111--Principles of Accounting | 4 |
| Pharmacy 121--Pharmaceutical Marketing | 4 |
| Pharmacy Administration 240--Pharmacy Management | 4 |
| Pharmacy Administration 255--Principles of Business Law | 4 |
| Pharmacy Administration 325--Social Studies in Pharmacy | 3 |
| Statistical Methods and Experimental Design | 4 |
| Professional Electives | 9 |

## 4. Pharmaceutical Sciences

This specialization requires calculus and physical chemistry as a foundation for three major fields:

| Courses | Credit |
|---|---|
| Mathematics 115--Calculus II | 4 |
| Mathematics 116--Calculus III | 4 |
| Chemistry 335--Physical Chemistry | 4 |
| Chemistry 336--Physical Chemistry | 5 |
| (a) Pharmaceutics | |
| Pharmacy 305--Physical Pharmacy | 3 |
| Professional Electives | 12 |
| (b) Medicinal Chemistry | |
| Chemistry 231--Drug Assaying | 4 |
| Chemistry 347--Organic Chemistry | 3 |
| Chemistry 348--Organic Chemistry Laboratory | 2 |
| Chemistry 358--Drug Design | 4 |
| Professional Electives | 2 |
| (c) Biological Sciences | |
| Chemistry 347--Organic Chemistry | 3 |
| Chemistry 348--Organic Chemistry Laboratory | 2 |
| Professional Electives | 10 |

## COURSES OF INSTRUCTION

The following list of subjects is arranged by departments. In the description of each course the quarter during which it is given is shown by a Roman numeral, "I" for the first quarter, "II" for the second quarter, and "III" for the third quarter, followed by an Arabic numeral in parentheses indicating the number of credit hours. As an example, "I, (3)" means that the course is given in the first quarter for three hours of credit. The series, "I", "II", or "III", is used when the course may be taken in any quarter.

### ENGLISH

110. INTRODUCTION TO POETRY AND THE DRAMA. Selected dramas and various types of poetry are studied and considered as art forms. Three class meetings each week. I, II, or III, (3). Prerequisite: Freshman rhetoric.

115. INTRODUCTION TO PROSE FICTION. The serious novel and short story are introduced, and representative examples in both categories are read and discussed. Three class meetings each week. I, II, or III, (3). Prerequisite: Freshman rhetoric.

205. PROFESSIONAL COMMUNICATIONS. Emphasis in this course is in the area of professional communication. Practice is offered in writing letters, memos, reports and articles on topics of current interest to the profession of pharmacy. I, II, or III (3). Open to Junior and Seniors only.

224. SURVEY OF AMERICAN LITERATURE FROM THE BEGINNINGS TO THE CIVIL WAR. Examples of American writing from Colonial times to the Civil War are read and discussed. Reading assignments include representative literary works with selections from critical writing. Three class meetings each week. I, II, or III, (3). Prerequisite: Freshman rhetoric. English 110 and 115 are preferred but not required.

225. SURVEY OF AMERICAN LITERATURE FROM THE CIVIL WAR TO THE PRESENT. Examples of American writing from the Civil War to the present time are discussed. Reading assignments include representative literary works with selections from significant critical writing. Three class meetings each week. I, II, or III, (3). Prerequisite: Freshman rhetoric. English 110 and 115 are preferred but not required.

235. THE TWENTIETH CENTURY NOVEL. The course provides a critical survey of the chief British and American novelists from 1900 to the present time. A comprehensive reading of major authors to show significant trends in modern prose is required. Three class meetings each week. I, II, or III, (3). Prerequisite: Freshman rhetoric. English 115 is preferred but not required.

### MATHEMATICS

110. INTRODUCTION TO COMPUTER CODING. Basic terminology of digital computation, organization of computers, fundamentals of algorithmic solution of problems including iteration techniques, flow diagrams, and self modification of computer codes. Four class meetings each week. III, (4). Prerequisite: A college level mathematics course or permission of the instructor.

111. CALCULUS I. Coordinate systems, straight lines, functions and graphs, theory of limits, derivatives and integrals of polynomials, applications of differentiation and integration are presented. Four class meetings each week. I, (4). Prerequisite: College algebra and trigonometry.

115. CALCULUS II. Extreme values; derivatives and integrals of trigonometric, logarithmic, and exponential functions; second degree curves, indeterminate forms; standard forms of integration; geometric and physical applications. Four class meetings each week. II, (4). Prerequisite: Mathematics 111.

116. CALCULUS III. Integration by parts; integration of rational fractions; polar coordinates; vectors, parametric equations; introduction to infinite series; partial derivatives; double integrals and applications. Four class meetings each week. III, (4). Prerequisite: Mathematics 115.

360. DIFFERENTIAL EQUATIONS. First order equations, linear equations of first and second order, linear equations of higher order, reduction of order, power series. Partial differentiation and integration, equations of order one, linear equations. Applications to physical problems in the health sciences. Four class meetings each week. III (alternate years), (4). Prerequisite: Mathematics 116.

362. PROBABILITY AND STATISTICAL INFERENCE I. The theory of probability; averages; dispersion; theory and techniques of sampling; testing of hypotheses. Applications to problems in the health sciences. Four class meetings each week. II, (4). Prerequisite: Mathematics 116.

363. PROBABILITY AND STATISTICAL INFERENCE II. Estimation; Chi Square distribution; curve fitting; correlation, the analysis of variance, nonparametric statistics. Applications to problems in the health sciences. Four class meetings each week. III (alternate years), (4). Prerequisite: Mathematics 362.

365. MATRICES, VECTORS AND LINEAR TRANSFORMATIONS. Matrix algebra; determinants; inverse of a matrix, rank and equivalence; linear equations and linear dependence; vector spaces and linear transformations. Applications to physical problems in the health sciences. Four class meetings each week. III (alternate years), (4). Prerequisite: Mathematics 116.

### MEDICINAL CHEMISTRY

111, 112, 113. ORGANIC MEDICINAL CHEMISTRY. This course involves a study of the nomenclature, occurrence, uses, physical properties, synthesis, and reactions of organic compounds. Concepts of stereochemistry, resonance, reaction mechanisms, and organic theory are used to develop an understanding of the course material. Three lectures, one recitation, and one four-hour laboratory period each week. I, (5); II, (5); and III, (5). These courses must be taken in sequence. Prerequisite: One year of college level chemistry.

121. PHYSICAL MEDICINAL CHEMISTRY. This introductory course outlines the scope of physical chemistry and its relationships and applications to other fields of science. It considers the physicochemical behavior of gases, liquids, and solutions, with special reference to biological phenomena. Three lectures or recitations and one three-hour laboratory period each week. I, (4). Prerequisite: Chemistry 113; Physics 111, 112, 113; Mathematics 111.

122. QUANTITATIVE PHARMACEUTICAL ANALYSIS. The principles of elementary quantitative analysis are presented. Reactions, calculations and techniques of quantitative measurements of gravimetric, volumetric and spectrophotometric methods of analysis are discussed. Selected laboratory exercises illustrate the principles involved in each type of reaction and their applications to the analysis of raw materials and dosage forms. Three lectures and two four-hour laboratories each week. III, (5). Prerequisite: Mathematics 111, and one year of college level chemistry.

123. BIOLOGICAL CHEMISTRY. This introduction to the chemistry of mammalian cells and tissues includes consideration of: enzymes; energetics, metabolism of carbohydrates, liquids, nucleic acids, proteins, and other nitrogen compounds; vitamins as co-enzymes; metabolic regulation, biochemical genetics; and nutrition. Three lectures, one recitation, and one four-hour laboratory each week. I, (5). Prerequisite: Chemistry 113.

231. DRUG ASSAYING. Basic scientific principles are applied to the standardization and analysis of drugs and pharmaceutical products. Applications of the newer analytical techniques of chromatography, colorimetry, spectrophotometry, and non-aqueous titrations to the control of pharmaceutical products are presented. Two lectures and two three-hour laboratory periods each week. II, (4). Prerequisite: Chemistry 113, 122.

245. UNDERGRADUATE RESEARCH IN CHEMISTRY. The student investigates, under the direction of one or more faculty members, a chemical problem of limited scope. The investigation may include experimentation and library research. Hours to be arranged. I, II, and III, (1 to 4). May be elected for a total of not more than six hours credit. Prerequisite: A grade point average of 3.5 and permission of the departmental faculty.

301. SYSTEMATIC IDENTIFICATION OF ORGANIC COMPOUNDS. The physical and chemical properties, classification, reactions, and methods of synthesis of typical derivatives are employed in the identification of organic compounds. Special conferences and a minimum of eight hours of laboratory work each week. III, (4). Prerequisite: Chemistry 113, 121.

335, 336. PHYSICAL CHEMISTRY. Atomic and molecular structure, chemical thermodynamics, phase equilibria, chemical equilibria, surface chemistry, electrochemistry, and chemical kinetics are discussed in this two quarter course. Three class meetings in Chemistry 335 each week and three class meetings and one four-hour laboratory in Chemistry 336 each week. Chemistry 335, II, (4); Chemistry 336, III, (5). Prerequisite: Chemistry 113, 121; Physics 112, 113; Mathematics 115, 116, or concurrent registration in Mathematics 115 for Chemistry 335 and concurrent registration in Mathematics 116 for Chemistry 336.

342. CHEMISTRY OF MEDICINALS. Modern synthetic drugs are studied with regard to their nomenclature, methods of synthesis, and relation to other drugs having similar therapeutic, physical, and chemical properties. Four lectures each week. II, (4). Prerequisite: Chemistry 113.

343. CHEMICAL TOXICOLOGY. The common sources, chemistry, methods of isolation, and identification of toxic agents commonly encountered as industrial hazards or as the cause of accidental or purposeful poisoning are discussed. Two lectures and two three-hour laboratory periods each week. III, (4). Prerequisite: Chemistry 113.

345. CHEMISTRY OF NATURAL PRODUCTS. The occurrence, origin, biological significance, nomenclature, physical and chemical properties, methods of isolation, and pharmaceutical uses of important natural substances are studied. Four lectures each week. I, (4). Prerequisite: Chemistry 113, 123.

347. ORGANIC CHEMISTRY. A continuation of the study of organic chemistry with emphasis on the application of general and special reactions to organic synthesis. Three lectures each week. I, (3). Prerequisite: One year course in organic chemistry.

348. ORGANIC CHEMISTRY LABORATORY. A continuation of organic chemistry with emphasis on techniques in the organic chemistry laboratory. Methods not usually encountered in basic courses in organic chemistry are stressed. Eight hours of laboratory each week. I, (2). Prerequisite: One year course in organic chemistry.

349. PHARMACEUTICAL ASSAYING. Chemical and physical methods of analyzing raw materials and dosage forms of medications are discussed. The principles of sampling and the methods of quantitatively separating active compounds from inactive diluent or vehicles are given special consideration. Two class meetings and two three-hour laboratory periods each week. I, (4). Prerequisite: Chemistry 231.

355. ADVANCED ANALYTICAL CHEMISTRY. This course provides an advanced treatment of the fundamental principles of analytical chemistry with emphasis on equilibria, on mechanism of important types of chemical reactions, and on methods of separation. Four lectures each week. I, (4). Prerequisite: Chemistry 122.

356. INSTRUMENTAL ANALYSIS LABORATORY. The practical aspects of instrumental analysis are emphasized. Analytical determinations using potentiometry, polarography, amperometry, coulometry, as well as analytical applications of electronic and vibrational absorption spectroscopy and gas chromatography, are included. One hour lecture and seven hours of laboratory each week. II, (3). Prerequisite: Chemistry 121, 122.

357. THEORETICAL PRINCIPLES OF INSTRUMENTAL ANALYSIS. The theoretical principles of instrumental analysis are discussed to provide the user of analytical instruments an understanding of the theories involved. Typical applications discussed. Three one-hour lectures each week. III, (3). Prerequisite: Chemistry 122, 336.

358. DRUG DESIGN. The physical and chemical factors to be considered in the rational design of potential biologically active compounds will be discussed. Topics include the relationship of potency to chemical structure, disposition of drugs in tissue, detoxification and mechanism of action will be discussed. Four class discussions each week. III, (4). Prerequisite: Chemistry 342.

## MICROBIOLOGY

233. MICROBIOLOGY. The nature, classification and relationship of living disease agents; principles of antisepsis, disinfection and sterilization. Principles of natural and acquired immunity, hypersensitivity and transplantation; immunization and vaccines. Infectious diseases of bacterial, mycotic, protozoan and viral etiology are presented in depth. Three lectures and two two-hour laboratory periods each week. I, (4). Prerequisite: Chemistry 123 and General Biology.

## PHARMACOGNOSY

232, 233. PHARMACOGNOSY. The physical, chemical, biochemical, and biosystematic aspects of natural drug and economic products, with particular emphasis on their role in pharmacy and medicine. Three lectures and one three-hour laboratory period each week. II, (4), and III, (4). These courses must be taken in sequence. Prerequisite: Organic Medicinal Chemistry 113; Chemistry 123; Microbiology 233; or demonstration of the equivalency of the content of these courses.

245. UNDERGRADUATE RESEARCH IN PHARMACOGNOSY. The student investigates, under the direction of one or more faculty members, a problem of limited scope in pharmacognosy. The investigation may include experimentation and library research. Hours to be arranged. I, II, and III, (1 to 4). May be elected for a total of not more than six hours credit. Prerequisite: A grade point average of 3.5 and permission of the departmental faculty.

295. SEMINAR IN BIOLOGICAL SCIENCES. A lecture-discussion type of seminar in pharmacology, pharmacognosy, and/or biology. Pertinent subjects will be presented by the staff, students, and/or invited speakers. May be elected for one hour credit in each of three quarters. Prerequisite: Fourth year standing with the permission of the instructor(s).

302. PLANT PHYSIOLOGY. Life processes in plants, with particular attention to the cell as the fundamental functional unit, are discussed. The basic principles of plant metabolism are emphasized in relation to essential elements, energy relationship, and other environmental factors. Three lectures or conferences and one three-hour laboratory period each week. I, (4); or three lectures and two three-hour laboratory periods each week. I, (5). Prerequisite: Pharmacognosy 233.

303. CHEMOTAXONOMY. A consideration of the systematic classification of plants based on the distributional correlations of certain well-defined secondary phytoconstituents and existing taxonomic plant groupings. The course will be based on current literature, and student participation and extensive library work will be required. Four lectures each week. II, (4). Prerequisite: Pharmacognosy 305 or equivalent.

305. PLANT TAXONOMY. Classification, identification, collection, and preparation of plants having medicinal or potential medicinal use. Major taxonomic systems and herbarium procedure will be discussed. Three lectures and two three-hour laboratory periods each week. I, (5). Prerequisite: Pharmacognosy 233.

307. PHYTOSCREENING. A course designed to allow the student to effectively evaluate small plant samples for the presence of specific groups of chemical compounds. One lecture and two three-hour laboratory periods each week. III, (3). Prerequisite: Chemistry 113, Pharmacognosy 233, and permission of the instructor.

310. GENETICS. This course considers the fundamental principles of biological inheritance and the application of these in the study of plant and animal life. Two lectures and two three-hour laboratory periods each week. I, (4). May be elected in the fourth year only. Prerequisite: Pharmacology 123.

## PHARMACOLOGY

122. INTRODUCTORY ANATOMY. The structure of mammals as correlated with function is studied. The fundamentals of mammalian embryology, evolution, adaptation, distribution, and classification are also presented. Two lectures and two three-hour laboratory periods each week. II, (4). Prerequisite: General Biology.

123. INTRODUCTORY HISTOLOGY. A study of the fundamental microscopic anatomy of tissues, organs, and organ systems. Correlation between structure and function is emphasized. Two lectures and one three-hour laboratory period each week. III, (3). Prerequisite: Pharmacology 122 or equivalent.

221. INTRODUCTORY PATHOLOGY. A consideration of the fundamentals of the science of disease. Emphasis is placed on the structure of the lesions found in developmental malformations, circulatory disturbances, inflammation, neoplasia, repair, and in retrogressive and progressive changes of the diseased organism. Two lectures each week. I, (2). Prerequisite: Pharmacology 123.

222. PRINCIPLES OF DRUG THERAPY. A consideration of the major diseases afflicting man from the viewpoint of patient history, symptomatology, laboratory findings, treatment, response to therapy and prognosis. II, (2). Prerequisite: Pharmacology 221.

241, 242, 243. PHARMACOLOGY. The factors underlying the applications of pharmacologic principles and agents to therapeutic problems are considered. Lectures and discussions are directed to an understanding of the mechanisms and sites of drug actions. Three lectures and one four-hour laboratory period each week. I, (4); II, (4); III, (4). These courses must be taken in sequence. Prerequisite: Organic Medicinal Chemistry 113; Chemistry 123; Physiology 232; Microbiology 233.

244. EMERGENCY AID. The role of the community pharmacist with respect to the legal and ethical codes as they apply to emergencies arising in the practice of the profession is outlined. Two lectures or conferences each week. II, (2). Prerequisite: Physiology 232.

245. UNDERGRADUATE RESEARCH IN PHARMACOLOGY. The student investigates, under the direction of one or more faculty members, a pharmacologic problem of limited scope. The investigation may include experimentation and library research. Hours to be arranged. I, II, and III, (1 to 4). May be elected for a total of not more than six hours credit. Prerequisite: A grade point average of 3.5 and permission of the departmental faculty.

310. BIOASSAY. Official, industrial, and general bioassay procedures are studied with emphasis on their applicability. Their reliability is considered on a statistical basis. Laboratory demonstration periods emphasize the designing, setting up, and analysis of representative bioassay preparations. Two lectures and two three-hour laboratory demonstration periods each week. II or III (alternate years), (4). Prerequisite: Pharmacology 241 and permission of departmental faculty.

311. DRUG BIOSCREENING. Drug screening procedures will acquaint the student with certain basic pharmacologic techniques in evaluating chemical compounds for their qualitative effects in the mammalian system. Emphasis will be placed on the procedures used, and the testing of drugs, with the analysis of data. Three lectures and two three-hour laboratory periods each week. II, (5). Prerequisite: Pharmacology 241 or equivalent.

## PHARMACY

110. ORIENTATION. A series of lectures or discussions intended to introduce the student to the scope and opportunities in the field of pharmacy are presented. One class meeting each week. I or II. Although successful completion of this course is required, credit toward graduation is not granted.

113. PHARMACY CALCULATIONS. The basic systems of weight and volume, the interconversion of these systems, and the methods of expressing concentration are presented. The mathematics of alligation, expansion and reduction of formulas, the calculation of doses and isotonic adjustment are discussed. One lecture per week. I, II, and III, (1).

121. GENERAL AND INORGANIC PHARMACY. The basic techniques of pharmacy are discussed. Inorganic compounds of pharmaceutical importance, including radio-pharmaceuticals, are presented with emphasis placed on their physical, chemical and biological properties, together with their respective medicinal and pharmaceutical applications. Three lectures and one three-hour laboratory period each week. II, (4). Prerequisite: Pharmacy 113.

122. ELEMENTARY PHYSICAL PHARMACY. The principles and laws of physical chemistry are applied to the preparation and study of dosage forms. Emphasis is placed on the homogeneous liquid dosage forms, i.e., syrups, elixirs, tinctures, etc. Three lectures or recitations and one three-hour laboratory period each week. II, (4). Prerequisite: Chemistry 121; Pharmacy 121.

123. DOSAGE FORMS I. This course deals with the application of physical pharmacy to the study and preparation of colloidal and heterogeneous liquid dosage forms, i.e., emulsions, suspensions, etc. Three lectures or recitations and one three-hour laboratory period each week. III, (4). Prerequisite: Pharmacy 122.

231. DOSAGE FORMS II. This course deals with the application of physical pharmacy to the study and preparation of semi-solid and solid dosage forms, i.e., ointments, suppositories, etc. Three lectures or recitations and one three-hour laboratory period each week. I, (4). Prerequisite: Pharmacy 123.

232. PHARMACY TECHNOLOGY. A variety of the more complex drug products is discussed in regard to ingredients, formulation, preparation, and packaging. Principal attention is given to topics of special importance to institutional pharmacy, including the equipment and facilities needed for an I.V. additive program, the incompatibilities of combinations of medications in I.V. solutions, and parenteral hyperalimentation. Two lectures, one recitation, and one three-hour laboratory or demonstration period each week. II, (4). Prerequisite: Pharmacy 231.

235. INTRODUCTION TO HOSPITAL PHARMACY. This course provides an introduction to the administrative and professional practice of pharmacy in hospitals and related health care facilities. Two lecture periods each week. III, (2). Prerequisite: Third year standing.

237. BIOPHARMACY. The absorption, distribution, excretion, and metabolism of drugs from their varied dosage forms are discussed. Clinical diagnostic methods such as urine and blood glucose, kidney and liver profiles are presented. Three lectures and one laboratory period each week. III, (4). Prerequisite: Pharmacy 231; Physiology 231.

241, 242, 243. CLINICAL PHARMACY. Drug product information, drug interactions, and analysis of patient medication records are presented. Laboratory work includes the compounding and dispensing of prescriptions. Students present oral and written comparative drug information reports. Clinical experience is attained in the dispensing and patient care areas of the University of Illinois Hospital and affiliates. Three lectures and one four-hour laboratory period per week for two quarters, and two four-hour laboratory periods for one quarter. I, (4); II, (5); III, (4). Prerequisite: Pharmacy 237.

245. UNDERGRADUATE RESEARCH IN PHARMACY. The student investigates, under the direction of one or more faculty members, a pharmaceutical problem of limited scope. The investigation may include experimentation and library research. Hours to be arranged. I, II, and III, (1 to 4). May be elected for a total of not more than six hours credit. Prerequisite: Three years of college with a grade point average of 3.5 and permission of the departmental faculty.

250. PHARMACY CLINICS. This course is designed to give the student an understanding of the dynamics of a health care team, to develop skills in inter-and intra-professional and patient interactions, and to identify present and future clinical roles for the pharmacist. Two hours of recitation and one four-hour laboratory period each week. I, II, and III, (3). Prerequisite: Pharmacology 242; Pharmacy Administration 330.

255. MANUFACTURING PHARMACY. Emphasis is placed on the structure of pharmaceutical manufacturing companies and on the functions and interrelationships of research, development, production scheduling, inventory control, quality control, (in-process, analytical, statistical) good manufacturing practice, and production. Two lectures and one four-hour laboratory period each week. III, (3). Prerequisite: Pharmacy 231.

260. INTRODUCTION TO INDUSTRIAL PHARMACY. This course deals with the principles of selection of ingredients, processes, equipment, facilities, stability tests and containers for tablets and other solid drug products. Drying, mixing, comminution, compression, coating and microencapsulation are discussed. Problems of both pilot plant and large scale production are considered. Two lectures and two four-hour laboratory periods each week. I, (4). Prerequisite: Pharmacy 231.

265. STERILE PRODUCT TECHNOLOGY. Emphasis is given to the products which must be sterile, and to the ingredients and procedures needed to give assurance that products are free from viable harmful microorganisms. Principles of antimicrobial activity, physical factors influencing the activity of antimicrobial agents, antiseptics, disinfectants, antimicrobial preservatives and protectants, chemical and physical sterilization are discussed. Two lectures and one four-hour laboratory period each week. II, (3). Prerequisite: Pharmacy 231.

275. ADVANCED FORMULATIONS. The composition, formulation, and manufacture of selected types of cosmetics are considered. Problems of perfuming, coloring, packaging, and preservation are discussed. Two lectures and one three-hour laboratory period each week. III, (3). Prerequisite: Fourth year standing.

280. HISTORY OF PHARMACY. An introductory course correlating the history of the profession with significant developments in the sciences and humanities. Selected readings of the (translated) works of master philosophers and scientists are utilized to gain insight into the social environment of the pharmacist throughout history. Three seminar-lectures each week. II, (3). Prerequisite: Third or fourth year standing and permission of the departmental faculty.

295. SEMINAR IN PHARMACY. The seminar is designed to provide the student with experience in the oral and written presentation of topics of current interest to the profession of pharmacy. One class meeting each week. I, II, and III, (1). May be elected for a total of not more than three credit hours and may be taken only once during any academic year. Open to sophomores, juniors, and seniors.

301. HOSPITAL PHARMACY PRACTICE I. This course provides principles, objectives, and methods of administration applied to management of a pharmacy service in a modern hospital. It includes the "classical" approach to management, a review of hospital structure and function, and the organization and direction of a hospital pharmacy service. Three lecture or conference periods each week. I, (3). Prerequisite: Pharmacy 250.

302. HOSPITAL PHARMACY PRACTICE II. This course provides guided experience in planning, organizing, and managing the various administrative and professional areas of a hospital pharmacy service. Two lectures and four hours of practice each week. II, (3). Prerequisite: Pharmacy 301.

305. PHYSICAL PHARMACY. Physicochemical principles and laws are applied to the study of pharmaceutical dosage forms. Special emphasis is placed on research reports in the current pharmaceutical literature. Three lectures each week. I, (3). Prerequisite: Pharmacy 231; Chemistry 121 or equivalent.

310. PHARMACEUTICAL ENGINEERING UNIT OPERATIONS. The study of the general theory of the unit operations and the dosage form manufacturing processes in which these operations are used. Two lectures and one four-hour laboratory period each week. I, II, or III, (3). Prerequisite: Permission of departmental faculty.

## PHARMACY ADMINISTRATION

111. PRINCIPLES OF ACCOUNTING. Fundamentals of accounting practice are discussed and applied to retail pharmacy. The discussions include methods applicable to stores operating as individual proprietorships or as partnerships. Four class meetings each week. I, (3).

113. ELEMENTS OF ECONOMICS. To introduce to the student those principles essential to an understanding of fundamental economic problems and the policy alternatives society may utilize to contend with these problems and to engage in the application of economics to the health field. Four class meetings a week. III, (4).

121. PHARMACEUTICAL MARKETING. Presentation of a definitive picture of the development and the present status of our system of marketing pharmaceutical products; critical analysis of the marketing task, the various essentials in the performance of the marketing functions, and the numerous and varied types of

institutions performing them; examination of the major policies and legal aspects that underlie the various activities of marketing institutions. Four class meetings a week. I, (4). Prerequisite: Pharmacy Administration 111 and 113.

235. PHARMACEUTICAL PROMOTION AND SELLING METHODS. The fundamentals and techniques of promoting and selling pharmaceutical products are examined. Consideration is given to promotional methods and personal selling in marketing activities of manufacturers, wholesalers, and retailers. Four class meetings each week. II or III, (4). Prerequisite: Pharmacy Administration 121.

240. PHARMACY MANAGEMENT. To provide the facts and principles derived from such basic disciplines as accountancy, economics, ethics, law, and marketing as these apply to decision making and management of a pharmacy. Four class meetings each week. II or III, (4). Prerequisite: Pharmacy Administration 111, 113, and 121.

243. PHARMACY LAW. The laws and regulations relating to the practice of pharmacy and the principles of common law bearing upon the work and responsibilities of the pharmacist are presented. Four lectures or recitations each week. III, (4). Prerequisite: Fourth year standing.

245. UNDERGRADUATE RESEARCH IN PHARMACY ADMINISTRATION. The student investigates, under the direction of one or more faculty members, a problem of limited scope in this field. The investigation may require library research. Hours to be arranged. I, II, and III, (1 to 4). May be elected for a total of not more than six hours credit. Prerequisite: A grade point average of 3.5 and permission of the departmental faculty.

255. PRINCIPLES OF BUSINESS LAW. The principles of business law covering the subjects of contracts, sales, negotiable instruments, agency and business organizations are discussed. Four lectures or recitations each week. II, (4). Prerequisite: Pharmacy Administration 111, 113.

325. SOCIAL STUDIES IN PHARMACY. The course will consider the social and psychological factors which determine group and individual attitudes toward illness, hospitalization, diagnostic procedures and treatment. The sociology of the hospital and the health care professions are examined. I, II, or III (3). Prerequisite: One course in introductory sociology or consent of the instructor.

330. BEHAVIORAL SCIENCES IN PHARMACY. This course will systematically examine the behavioral science contributions to current understandings of the problems of health, disease and treatment. The topics to be considered include: the role of emotional factors in disease; diagnostic procedures and treatment; psychological aspects and effects of the practitioner-patient relationship; effects of the individual-environment relationship upon disease etiology; drug effects, course of illness and effectiveness of treatment. The psychological aspects of the dying patient will also be considered. I, II, or III, (3). Prerequisite: One course in introductory psychology or consent of the instructor.

## PHYSICAL EDUCATION

101, 102, 103. PHYSICAL EDUCATION. The program is designed to develop physical fitness and skills in various recreational activities. Credit may not be used for graduation. I, II, and III, (1).

## PHYSICS

111, 112, 113. GENERAL PHYSICS. This course presents a study of the fundamental concepts and laws of physics and is designed to give a thorough presentation of the principles of classical physics as well as of the more recent developments. Attempts are made to apply the theoretical matter to practical problems. Two lectures, one recitation, and one three-hour laboratory period each week. I, (4); II, (4); and III, (4). Prerequisite: College algebra and plane trigonometry. Physics 111 is a prerequisite for either Physics 112, or 113.

315. MODERN PHYSICS. Basic tenets of relativity and quantum theories are presented. Topics discussed include elementary particles as well as atomic and nuclear structure. The biological and chemical implications of physics are stressed. Three lectures each week. (3). Prerequisite: Physics 113; Mathematics 111.

325. RADIOACTIVE ISOTOPES. The properties of alpha, beta and gamma radiation and methods of their detection are discussed. The use of tracers in radiobiology, medicine, and chemistry, including the applications to therapy and health physics, are included. Methods of assaying and dispensing radioactive pharmaceuticals are emphasized. Two lectures and one four-hour laboratory period each week. (3). Prerequisite: One year general physics course.

## PHYSIOLOGY

231. HUMAN PHYSIOLOGY. This course deals with the fundamental aspects of human and mammalian physiology as the basis for understanding some elementary concepts of clinical physiopathology. The systems formally covered in the first term are: the autonomic nervous system; blood, heart and circulation; respiration; body fluids and kidney; and digestion. Four lectures or demonstrations each week. I, (3). Prerequisite: Pharmacology 122.

232. HUMAN PHYSIOLOGY. This course is a continuation of Physiology 231. The systems covered in this term are: energy metabolism and temperature regulation; liver; nervous system and muscle; special senses; and endocrine glands. Four lectures or demonstrations each week. II, (4). Prerequisite: Physiology 231.

## PSYCHOLOGY

126. INTRODUCTORY PSYCHOLOGY. Introductory analysis and description of human behavior. The course systematically considers biological and social aspects of behavior, growth and development, motivation, emotion and adjustment, personality and its appraisal, learning and perception. Three lectures or recitations each week. I, II, or III, (3).

## SOCIOLOGY

125. INTRODUCTORY SOCIOLOGY. This course serves as an introduction to the basic structure and the principal forces which influence human society. The fundamental aspects of social organization, culture, socialization and personality, social interaction, collective behavior, and social change are considered. Three lectures or recitations each week. I, II, or III, (3).

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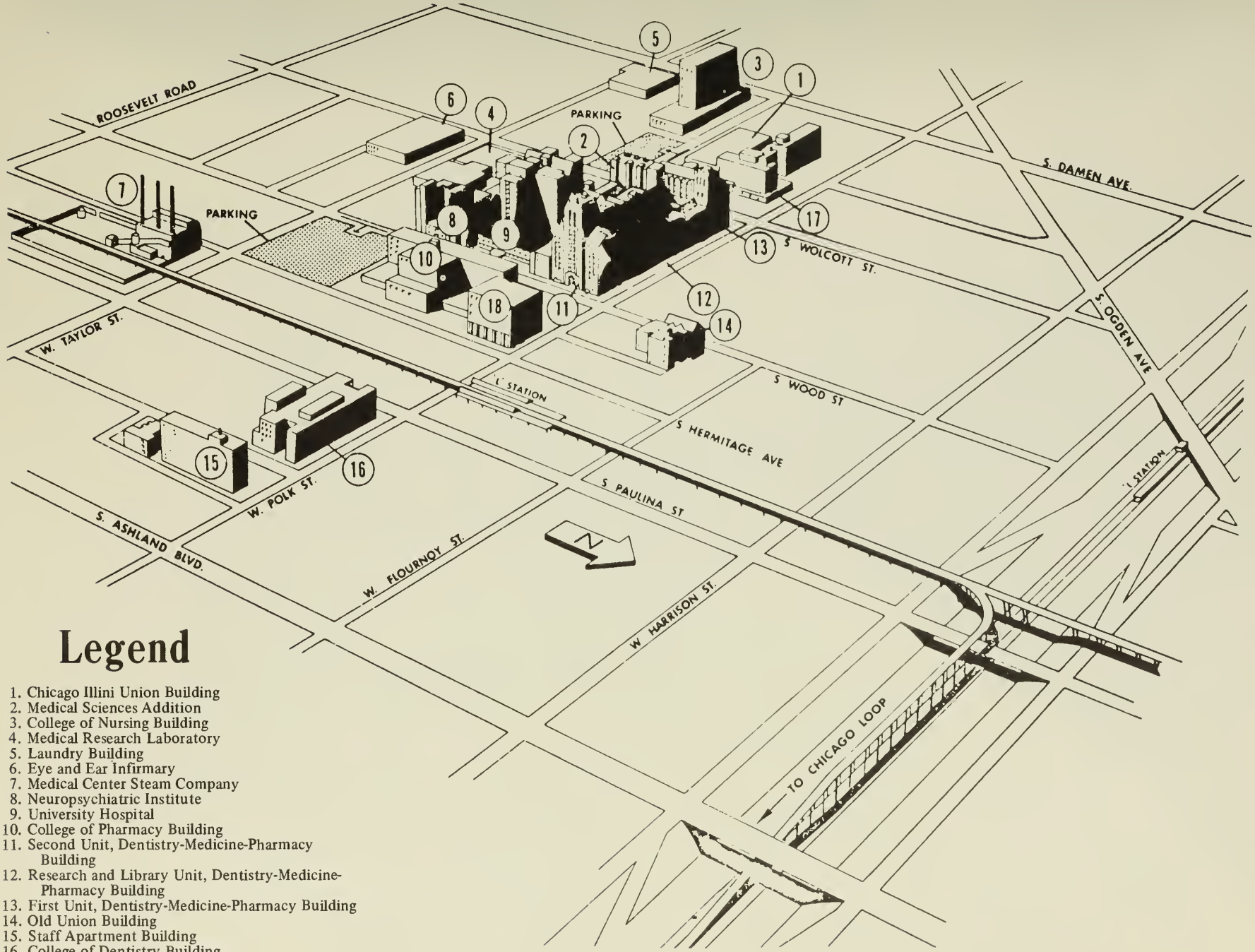
# University of Illinois at the Medical Center




## Legend

1. Chicago Illini Union Building
2. Medical Sciences Addition
3. College of Nursing Building
4. Medical Research Laboratory
5. Laundry Building
6. Eye and Ear Infirmary
7. Medical Center Steam Company
8. Neuropsychiatric Institute
9. University Hospital
10. College of Pharmacy Building
11. Second Unit, Dentistry-Medicine-Pharmacy Building
12. Research and Library Unit, Dentistry-Medicine-Pharmacy Building
13. First Unit, Dentistry-Medicine-Pharmacy Building
14. Old Union Building
15. Staff Apartment Building
16. College of Dentistry Building
17. Student Residence Hall
18. Administrative Office Building

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